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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,158	09/24/2003	Seiji Horie	019519-407	2772

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,158

Applicant(s)

HORIE ET AL.

Examiner

Callie E. Shosho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/24/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in Japan on 9/27/02 and 9/30/02. It is noted, however, that applicant has not filed certified copies of the Japanese applications as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 recites an improper Markush group. It is suggested that in the first line after formula (I), after "from", the phrase "the group consisting of" is inserted.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Oshima et al. (U.S. 2002/0058729).

Oshima et al. disclose oil-based ink for ink jet printer wherein the ink comprises non-aqueous dispersion medium, pigment, dispersant, and polymer in the form of graft polymer or block polymer wherein the polymer is obtained from monomers including cyclohexyl acrylate and octadecyl methacrylate. There is also disclosed method of forming an image using ink jet printer (paragraphs 1, 26-31, 46-51, 55, 59, 61-62, and 67 (lines 2-3). Although there is no explicit disclosure that the polymer is a binder, given that Oshima et al. disclose polymer identical to that presently claimed, it is clear that the polymer would inherently function as a binder.

In light of the above, it is clear that Oshima et al. anticipate the present claims.

6. Claims 1 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (U.S. 5,254,425).

Suzuki et al. disclose oil-based ink for ink jet printer wherein the ink comprises non-aqueous dispersion medium, colorant, dispersant, and binder that is graft polymer obtained from monomer containing aliphatic cyclic hydrocarbon group such as cyclohexyl acrylate and macromer that is soluble in the non-aqueous dispersion and possesses molecular weight of 1,000-5,000. There is also disclosed method of forming an image using ink jet printer (col.1, lines 8-15,

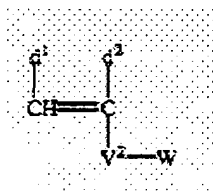
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col.4, lines 1-7, col.5, lines 30-41, col.6, lines 28-31, col.7, lines 17-47, col.8, lines 10-14 and 27, col.9, lines 17-20 and 55-60, col.15, lines 55-61, col.16, lines 1-3, and col.17, lines 36-37).

In light of the above, it is clear that Suzuki et al. anticipate the present claims.

7. Claims 1-2, 4, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato (U.S. 6,302,537).

Kato discloses oil-based ink for ink jet printer wherein the ink comprises non-aqueous dispersion medium, colorant, and block polymer comprising soluble component block obtained from monomer of formula (II) and insoluble component block obtained from monomer of the formula:



which is identical to that presently claimed when V^2 is $-\text{COO}-$, $-\text{OCO}-$, etc., W is cyclopentyl, and d^1 and d^2 are each hydrogen, halogen, cyano group, etc. There is also disclosed method of forming an image using ink jet printer (col.1, lines 5-9, col.3, lines 14-17, col.3, line 30-col.4, line 15, col.6, lines 33-40, col.8, lines 1-8 and 31, col.12, lines 43-48 and 58-59, col.12, line 66-col.13, line 7, col.27, lines 21-27, col.29, lines 11-14 and 49-52).

In light of the above, it is clear that Kato anticipates the present claims.

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8. Claims 1, 4, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Qian et al. (U.S. 2002/0128349).

Qian et al. disclose oil-based ink comprising non-aqueous dispersion medium, pigment or dye, and graft copolymer binder obtained from monomer including trimethylcyclohexyl methacrylate and alkyl (meth)acrylate such as lauryl (meth)acrylate or octadecyl (meth)acrylate. There is also disclosed method of forming an image using ink jet printer (paragraphs 3, 8, 37-46, 48, 50-51, and 63).

In light of the above, it is clear that Qian et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (U.S. 6,302,537) in view of Suzuki et al. (U.S. 5,254,425)

The disclosure with respect to Kato in paragraph 7 above is incorporated here by reference.

The difference between Kato and the present claimed invention is the requirement in the claim of dispersant.

Suzuki et al., which is drawn to oil-based ink, disclose the use of dispersant in order to increase the stability of the dispersion of the pigment (col.17, lines 34-37).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use dispersant in the ink of Kato in order to produce ink that has stable pigment dispersion, and thereby arrive at the claimed invention.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Kato (U.S. 6,127,452), similar to Kato (U.S. 6,302,537), disclose oil-based ink comprising block polymer obtained from monomers including those containing aliphatic cyclic hydrocarbon group.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
8/27/05